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5. Members who shall allow their dues to remain unpaid for two years, having been annually notified of their arrearage by the Treasurer, shall have their names stricken from the roll.

6. One-fourth of the income of the Academy shall be set aside for the increase of the library—all purchases to be first authorized by the Executive Committee.

7. The Librarian shall have charge of the distribution, sale and exchange of the published "Transactions" of the Academy, under such restrictions as may be imposed by the Executive Committee.

8. Eight members shall constitute a quorum for the transaction of business.

A committee appointed at the opening of the session to nominate the officers for the ensuing year, returned the names of the following persons, who were duly elected by the Academy to the respective positions:

President—R. J. Brown, of Leavenworth.

Vice Presidents—F. H. Snow and Joseph Savage, of Lawrence.

Treasurer—A. H. Thompson, of Topeka.

Secretary—E. A. Popenoe, of Manhattan.

Board of Curators—O. H. St. John and J. T. Lovewell, of Topeka; J. H. Carruth, of Lawrence.

On the evening of the 21st the retiring President, Dr. A. H. Thompson, delivered an address, which, on account of the importance of its information concerning the growth of the Academy, and by a departure from the usual course of the Publication Committee in such cases, we here print:

ADDRESS OF THE RETIRING PRESIDENT, DR. A. H. THOMPSON, OF TOPEKA.

Subject: "THE ORIGIN AND HISTORY OF THE ACADEMY."

Mr. President, and Members: In compliance with the requirements of a by-law adopted at our last annual meeting, it becomes my duty at this time to perpetrate what is by courtesy therein designated as "the President's retiring address." This peculiar diversion, thus legalized, was instituted and made obligatory upon the occupant of this chair upon his retirement, by way of following the custom prevalent in other societies, and especially in scientific associations, of exacting this tribute from this officer. It is, perhaps, in some sense, a sort of peculiar price to be paid over at the close of his term of office, as a return for the honor and dignity thrust upon a modest member by his election to the highest office within the gift of the Society. In the present instance, the price is paid down as a feeble and inadequate expression of the high appreciation and estimation in which this, the highest honor within the gift of the Academy, is held by the retiring incumbent.

In most scientific associations, the honor of election to the presidency is imposed as a timely and appropriate recognition of scientific attainments and discoveries, and it is often most worthily bestowed, as the practice in the highest associations in this country and in Europe illustrates. But in all confidence, I am obliged to confess, that in the present instance I cannot perceive that this has been the case, much as I regret the fact; and it becomes, in view of this, a gift of courtesy and not of deserts, and is therefore the more appreciated.

Former presidents of the Academy have at times given volunteer addresses upon their retirement from office; but the custom does not appear to have been constant nor at any time obligatory. These addresses have been in the nature of popular lectures upon scientific subjects, and with but little reference to the Academy, its needs or wants. But presidential addresses are now made legal, and will be exacted from all occupants of this chair hereafter. This is therefore the first penalty under the new law, and the opening performance in the series of addresses which are to follow from successive presidents. This fact suggested to my mind that no more appropriate subject—since I was obligated to have a subject—could be selected for the first of the series than the history of the Academy.

A glance into the past years of the Society, and a sketch of the steps leading to its organization, its early days, and its subsequent history: nothing of this sort has been attempted, so far as I could ascertain, except a brief sketch in the Eleventh Annual Report of the Department of Public Instruction for 1871, (page 181,) and as that is brief and now twelve years old, it seemed appropriate to the occasion to take the subject up again, and also, in order to make it more complete by further research, to bring it up nearer to date. In addition to the interest we naturally have in everything pertaining to our early history, this work appeared the more imperative, as much that is of interest and value is being lost by the death or removal of the first members of the Society, the chief actors in its organization. As I proceeded to investigate the history of the first years, I was deeply impressed with the need of some such effort being made for the speedy collection and preservation of the facts and incidents connected therewith, as much valuable matter I found was never recorded, but is only preserved in the memories of a few persons. Some links in the chain of interesting incidents and events are even now irretrievably lost: some lie buried with the dead, others are known only to members scattered to the ends of the earth. But the fragments I have endeavored to collect, and the result it is my pleasure to present to-night.

Much relating to the early days of science and the Academy has been recorded, and of this I have of course made free use; but in addition to this, I have communicated with some of the organizers and early members, and other persons in possession of needful facts and incidents, who have, so far as I could hear from them, been uniformly kind, and freely contributed of their knowledge. I take this opportunity of publicly thanking them for their patient kindness and assistance. Without their aid I could have done little or nothing, and to them must be accredited all that is new in my offering. There is much, of course, that I have been unable to find, and I hope those members who know or can procure anything in addition, will feel it their duty to record and preserve such knowledge without delay. My résumé is by no means exhaustive, and with this explanation I will hasten to submit it.

One of the earliest reports published of systematic scientific work in the region now included in the State of Kansas, if not indeed the very first, is that of Prof. G. C. Swallow, of St. Louis, and Major F. Hawn, of Leavenworth, upon the result of several years' collecting in the Territory of Kansas by the latter gentleman. The report "On the Rocks of Kansas," was presented to the St. Louis Academy of Sciences, February 22, 1858. Maj. Hawn says, in his note added to the report, that he began collecting fossils as early as 1855. This date must surely entitle him to the honor of being the first scientific worker in the State. His results were forwarded in 1857 to Prof. Swallow, and a certain division to Prof. F. B. Meek, who reported his examinations and discoveries to the Albany Institute, March 2d, 1858. These reports contained much of interest and value in their day, and in addition to their scientific interest to us, have served as a groundwork, and supplied data for later investigations and explorations.

After this first special report upon the geology of Kansas, various fragmentary articles upon the subject of natural science, and the resources of the region, were published in different periodicals, railroad survey reports, etc. Of these I cannot attempt to give you a list, as they are scattered and incomplete, and of various degrees of importance The new papers of those years also contained notices and articles on scientific subjects of no little value; but these are still further beyond cataloguing.

The next important and special report upon the geology of the State was that of Prof. B. F. Mudge, in 1864. It is called the "First Annual Report on the Geology of Kansas," by B. F. Mudge, State Geologist. It is an epitome of the scientific and practical results of the geological exploration of that year, conducted by the means of a small appropriation made by the Legislature of the preceding winter for that purpose, as per Acts of 1864 (ch. 63, p. 109.) Considering the means at his disposal, (he expended only $2,000,) the results are excellent; but all who knew the man are not surprised that he should have produced so much from so little. The report was necessarily preliminary and general, but it was a good start for a grand work, which should have been continued; and it is a stain upon the vaunted intelligence and enterprise of our people that it was not resumed long ere this.

The survey was organized with the following *personnel* (*Journal of Education*, vol. 1, page 125): Professor B. F. Mudge, State geologist; Maj. Frederick Hawn, assistant superintendent; Prof. G. C. Swallow, paleontologist; Tiffin Sinks, M. D., chemist and meteorologist; C. A. Logan, M. D., botanist, and the sanitary relations of the State.

The *Educational Journal* adds that "the geological corps is composed of gentlemen whose literary merit is unquestioned, and who are in every way well qualified to discharge the duties severally assigned them. We greatly need a thorough geological survey of the State, and if it could discover nothing but coal and salt, we would be richly repaid for the cost. The appropriation is small, too small to enable it to be at all thorough; but if the scientific men of the State will aid all they can it will do much to increase its thoroughness. We would call especial attention to the request published in this *Journal* to send botanical specimens to Dr. Logan. Much can be done in this way to aid each department in gathering information.

"The mineral wealth of our young State is the property of its inhabitants. Providence has distributed these bounties for the benefit of his creatures, and placed them just far enough below the surface of the earth to promote our industry and education. Success to our geological corps."

The *Educational Journal*, by the way, did much to promote a healthy love of nature in those days, and abetted the early struggles of science in the State not a little. It published many scientific articles, encouraged the geological survey, and was in every way the friend and helper of scientific research.

Prof. Mudge's report for 1864 was published by Hon. John Speer, of Lawrence, the State Printer, in 1866. It has now become very rare and difficult to obtain, and I am indebted to the courtesy of the State Historical Society for the privilege of examining a copy in their invaluable collections.

Prof. Mudge's work was conscientiously done, and as thoroughly as a most economical disposition of the public funds set apart for the purpose, and supplemented by his private contributions to the expense of his explorations, would allow. The report was a most valuable exposition of our economic resources and of the scientific knowledge then attainable, and will long stand as an honor to the early days of science in Kansas.

In 1865, Prof. G. C. Swallow published a report on the Geology of Miami county, Kansas, issued, I think, in Kansas City. In 1866 he also published a report upon the Geology of Kansas, which was printed by Jno. Speer. He was appointed under an act of the Legislature of 1865, (ch. 40, p. 89,) authorizing a survey. This work, owing to the troubles on the frontiers, was confined to the eastern part of the State, and was, he says, mainly a continuation of his work in connection with the geological survey of Missouri. It was also largely an extension of his report upon the collection of Major F. Hawn, published in 1858. This last report is supplemented by a contribution on geology by Maj. F. Hawn; one upon the sanitary relations of the State, by Dr. C. A. Logan; and one also by Dr. Tiffin Sinks, upon the climatology of Kansas. As a whole, the publication is of great scientific and historical interest. It is quite rare now, as much so as Swallow's "Rocks of Kansas."

These reports contain the bulk of the scientific work accomplished, and represented about all there was known of our natural resources up to the time of the organization of the Academy. From them and from the various scientific articles contributed to the miscellaneous periodicals of the State, we learn what was the scientific condition of the field in which it was proposed to start a scientific society. The material which would render such an organization possible, we should at this distance of time consider rather meager; we can but wonder that it was attempted at all. But the founders were enthusiastic and hopeful, and the result justified the wisdom of making the efforts at that time. The enthusiasm of two men in their love of nature seems to have been the main cause of the inception of the enterprise and of the attempt to organize it. I refer, of course, to Prof. B. F. Mudge and Prof. J. D. Parker, the originators and founders of the Kansas Natural History Society. It is something for the scientific men of the State to be proud of, that a society devoted to scientific investigation and the popularization of science should have been organized thus early in the history of the State; that it has been sustained through all the vicissitudes incident to the career of such a society for sixteen years without missing a single meeting; that it has an honorable record for efficiency and usefulness; and that it has promoted the study and investigation of nature throughout the State. All credit and honor belong to the founders, and it is our pleasure to improve every opportunity of rendering them all just honor and the acknowledgment of our indebtedness.

Prof. J. D. Parker was the principal actor in the origination of the Society, and to him is due its suggestion, inception, and exertions. He writes me:

> "The conception of the Society was original with me. The name, 'Kansas Natural History Society,' I derived and adopted from the Illinois Natural History Society, of which I had been a member. I moved the resolutions enlarging the scope of the Society and changing the name to 'Kansas Academy of Science.' I enlisted Prof. Mudge as the first recruit in the new movement, after I had visited him and thoroughly discussed the whole subject. I published the first articles in reference to organizing such a society. I wrote out, circulated and published the 'call' for the first meeting. I called the first meeting to order, and nominated Prof. Mudge as chairman, and afterward as President. I helped draft the constitution and by-laws; acted for the first five years as Secretary; edited the first report published by the State Board of Agriculture; demanded that Alfred Gray should make it a coördinate branch of the State Board of Agriculture, thus preserving the autonomy of the Society; and signed as Secretary the official paper to the Secretary of State when the Academy became a State organization.
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> "I worked on the organization several months, and then wrote to Prof. Mudge about it; but he thought it was too early in the history of the State to organize such a society. Prof. Alex. Winchell had failed to organize an Academy in Michigan, and Prof. Mudge was justly cautious."

But there is one man to whom we are more indebted, perhaps, than to all other causes combined, for all that we have and all that we are; one who was at once the best, the wisest, the grandest man whose name ever graced the annals of science in Kansas. I refer of course to Professor Benjamin F. Mudge. Any mention of the Academy or of its past work or purposes without naming Professor Mudge, would be, to use a vulgarism, "like the play of Hamlet with Hamlet left out." The name and work of the Academy are inseparable from the name and work of Professor Mudge. Its very existence is due to the affection he had for it and the care he bestowed upon it. It is an honor of which we shall ever feel proud, that our organization should have been the care of such a man; that he was mindful of it in the days of its weakness; that its prosperity gratified him, and that he considered its welfare before all other societies which were honored by his membership.

Personally the fullest praise can do scant justice to his many superior qualities of mind and heart; words cannot portray his delightful presence, his genial face, his well-stored mind and his boundless kindness and enthusiasm. But he is gone, and we have left only the memory of his inspiring presence, our undimmed affection, and the ever useful record of his works. And how we miss him at every step; the void is yet painfully vacant four years after his untimely death. How we used him in every undertaking to counsel and help us! His loss to the Academy and to science in Kansas can never be estimated. It is scarcely too much to say that if he had lived that we would have had a geological survey before this; for his extraordinary popularity throughout the State, and the profound respect and regard in which he was held by all classes of intelligent people, would have gone far towards securing that much-desired enterprise.

I have collected some reminiscences of our dear friend and benefactor in connection with notes gathered relative to the steps taken toward the organization of the first Natural History Society and its history. They are from my gleanings, from contributions by different friends, especially Mrs. Mudge, and from personal recollections. "The first brief report of the geological survey of Kansas gives an outline of his early scientific labors in the State of his adoption. . . . It was during the war, and attended with many difficulties. The field was new, and the geological features entirely different from those to which he had been accustomed in his New England home. Though harder for him, it only added zest to his enthusiasm, and he bravely overcame obstacles which would have discouraged one less in love with Nature and her laws. His own wants were few and simple. With public funds he was strictly conscientious, yet the appropriations for the survey were so small as to hamper him greatly, and he supplied provisions for the early part of his trip from the home larder to lessen expenses. His travels were sometimes perilous, and frequently involved very hard labor. He was much perplexed when he had the main part of the report ready, to find that characteristic specimens, which he had sent to the paleontologist carefully labeled, had been disarranged or lost, so that, after embarrassing delays, the report was finally put through the press incomplete. He never despaired of having more generous appropriations from the State, when he or some other geologist would complete so important a survey." . . . "In lecturing he prepared his thoughts with care; but once having clearly fixed in his mind what he wanted to say, his retentive memory had no further use for the notes." And how much we did enjoy those lectures! How the memory of them hangs like a fragrance about the walls of even this dingy capitol building, where we have listened to him year after year! How contagious and inspiring was that exhaustless enthusiasm to all the young men with whom he came in contact! It was my privilege to have him for a near friend for many years, and many are the precious moments, in private conversation as well as in public lectures, that I have sat drinking at the fountain of knowledge which flowed in charming streams from his lips. How well I remember a day, years ago, when he came hurriedly into my office, on Kansas avenue, all aglow with excitement, to inquire if I had seen the tracks on a piece of Osage flagging which was being used as a crosswalk on the avenue at Sixth street. I was loth to admit that I had crossed and recrossed on the stone with the rest, and like them had never noticed the tracks; but we went together to see the stone, and sure enough there were the marks, as distinct as could be, and his beautiful enthusiasm was at its height. That was one of the first examples he had seen of these tracks, which he afterwards investigated and described so charmingly. He dropped all his affairs, went directly to the quarries the very next day, and procured a quantity of the rocks with tracks.

"While State Geologist, the delightful experience of discovering hitherto unknown fossils and the valuable economic deposits of Kansas, awakened in him a strong desire for the formation of scientific societies, not only for a wider dissemination of knowledge of these resources, but the preservation within our own borders of such rare specimens. He improved every opportunity by lectures and conversations to encourage a growing interest in science. The large area and the few railroads were discouragements to most people regarding a State organization, with perhaps a lack of interest. He really longed for the scientific companionship which he had enjoyed in the East from boyhood — the libraries, public societies, parlor clubs, field meetings of the Essex (now Peabody) Institute, long botanical excursions with congenial companions — how much he missed them! But in 1867 Rev. J. D. Parker Professor-elect of Lincoln College at Topeka, spent some weeks at Manhattan. He was fresh from his studies and an enthusiastic lover of nature, and together with Professor Mudge they prospected and walked, talked and planned." It is probable that it was at the tea-table of Hon. I. T. Goodnow, with Professors Mudge and Parker, that the subject of a Natural History Society for Kansas was first broached. That is Mr. Goodnow's recollection of it. Prof. J. D. Parker writes in his obituary sketch of Prof. Mudge in the Kansas City *Journal of Science* (vol. 3, page 570), that, during the summer vacation of 1867, he first became personally acquainted with Prof. Mudge, when, by special invitation, he "spent three royal weeks" at his home in Manhattan. The days were spent in scientific rambles and in making collections in the vicinity, and the nights until a late hour in discussing scientific subjects. During this visit was matured the plan for organizing the Kansas Natural History Society, which afterwards grew into the Kansas Academy of Science. Of this organization Prof. Mudge was elected the first President, and was again President at the time of his death. "During those twelve years he was unwearied in his labors for the Academy, always cherishing plans for its development and growth, and whose success formed one of the most joyous experiences of his life. In no organization did he take a greater interest, and he has come in from the plains, hundreds of miles, bronzed and travel-worn, to attend its meetings."

The next step of which I am aware was the publishing of the following letter, in the *Journal of Education* for March, 1868, (vol. 4, page 268:)

A NATURAL HISTORY SOCIETY.

Editors Journal of Education: Allow me to call your attention to the importance of forming a Natural History Society in our State. The benefits flowing from such an organization would be various, among which I will mention the following:

1. It would afford means of associated effort.
2. It would give inspiration to naturalists.
3. It would afford opportunities for exchanges.
4. It would diffuse a spirit of scientific research.
5. It would put the State in direct communication with the various scientific bodies of the country.
6. Large collections would ultimately be made by such society, which would be permanently secured to the State.

Has not the time arrived for the friends of natural science to move in the matter? Some of the leading naturalists of the State are favorable to the organization of such a society at an early day. The State authorities would doubtless aid such a society in publishing valuable reports and in storing collections. Very truly yours, J. D. PARKER.

In my pursuit of material, I have been fortunate enough to induce Prof. Parker to favor me with a record of recollections, which I will read *in extenso:*

FORT STOCKTON, TEXAS, August 20, 1883.

Dr. A. H. Thompson, President Kansas Academy of Science—DEAR SIR: Cheerfully I comply with the request contained in your favor of August 10th, and give what information I can in regard to the first meeting of the Kansas Academy of Science, and the preliminary steps which led to the organization of the Society.

When I was called in April, 1867, to Lincoln College, Topeka, there was no scientific association in Kansas, and no general interest in science apparent in the State. The people of Kansas had suffered intensely in the border strife followed by the civil war, of which at Topeka there were still evidences in the rifle pits along the southern edge of the town, and in the palisades still standing at the intersection of Kansas avenue and Sixth street.

Prof. B. F. Mudge, of the Kansas Agricultural College, had published a report on the geology of the State, and another report had been published by Prof. G. C. Swallow, late of the University of Missouri; Prof. Frank H. Snow had recently been called to the University of Kansas. These scientists and some others were pursuing various lines of investigation, but there was no organization to bring them together to secure the results which flow from associations. I was impressed with the necessity of some society to accomplish this object. I determined, if possible, to organize a State Scientific Society. After agitating the matter several months, and not meeting any encouragement at Topeka, I wrote to Prof. B. F. Mudge, who replied that his heart was with us in the work, but he feared it was too early in the history of the State to organize such a society. Accepting an invitation to visit him during the long vacation, I spent three royal weeks at his house in Manhattan, where we discussed the subject very thoroughly during our scientific rambles in that neighborhood. Before my return, Prof. Mudge promised to go into the movement. Satisfied with his indorsement and promised coöperation, I returned home, and set the matter before the people of the State through the public press. In due time a call was published and circulated, which received the signatures of various scientific and public men of the State, to hold a meeting in my recitation room in Lincoln College, Sept. 1, 1868. A great storm occurred two days before the meeting, which threatened to interfere with it. But Prof. Mudge came down the day before the meeting full of enthusiasm in the new movement, and the meeting was held at the appointed time, with a very small attendance; but we organized the Kansas Natural History Society, of which Prof. Mudge was elected the first President, and I was elected the first Secretary.

For two years Prof. Mudge and I struggled hard to keep the association alive, for we had great misgivings in regard to its very existence. Public attention was often called, through the press, to the importance of sustaining it, and wherever we lectured in the State we always presented the claims of the Society.

The first annual meeting was held in the First Presbyterian church, at Topeka; but there was a very small attendance, and little enthusiasm. It was in fact a very gloomy time with the Society. There was little or nothing in the treasury, and none seemed to care for science. But Prof. Mudge was full of faith in our final success, and said we "must not despise the day of small things." We agreed to go on notwithstanding the discouragements, and determined that we would not say "fail" until we actually did fail. The officers were unanimously reëlected — for there was great unanimity in those days, where two or three votes settled the whole matter.

During the following year we worked faithfully in trying to establish the Society, but with very little encouragement from the public. Everybody was busy about something else, and science was left to take care of itself. At the end of two years, we received an invitation from Prof. Snow, indorsed by the three professors of the State University, to hold the annual meeting at Lawrence. We gladly accepted the invitation, and the meeting was so well attended, and such a desire expressed to enlarge the scope of the Society so as to include every line of scientific investigation, that it was so ordered. The name was changed, at a subsequent meeting, to the Kansas Academy of Science. Several excellent papers were read at that meeting by Profs. Mudge, Snow, Bardwell, and others, which were worthy of any veteran society. The meeting was one of joyful interest on the part of those who had labored amidst so many discouragements, for we believed that the permanency of the organization was now fully assured. The growth of the Society has, in fact, outrun all our early anticipations, and from this time the history of the Academy has been very generally known by the people of the State. Students of science, in almost every line of investigation, have come forward, and gladly carried on the work of the Academy, making original contributions in almost every department of science. But while we greet this ever-important work of scientists, and give them all honor for their invaluable contributions, we must not forget the importance of the work wrought by Profs. Mudge and Snow in the early history of the Society.

The subsequent action of the Legislature in making the Society a State institution, and giving it a room in the Capitol building, was unsolicited, but was a well-deserved recognition by the State, of science and the Academy.

In this connection, will you pardon me for saying, that the ultimate success attending the organization of the Kansas Academy gave me encouragement, when I moved to Kansas City, to try and repeat the work there. For seven years I was permitted to work on amidst the whirl of a large and growing city, in discouragements, in trying to lay the foundations of the Kansas City Academy of Science, whose interests are so intimately interwoven with that of the Kansas Academy. If the people of Kansas and of Kansas City will continue to cherish their Academies so that they shall become a blessing in coming years, and if these Academies will remember that they are closely related in origin, interest and work, and ever have towards each other those fraternal relations which should characterize scientific societies, I shall be amply repaid for my efforts. Fraternally yours, JOHN D. PARKER, *Post Chaplain.*

"Prof. Parker's location at the State capital favored the idea which Prof. Mudge had long cherished, of a central organization, and the result was a call for a meeting at Topeka." The following "call" was issued July 6, 1868. It reads: "*State Natural History Society.*—We, the undersigned, desirous of securing the advantages arising from association in scientific pursuits, and of giving a more systematic direction to scientific research in our State, hereby invite all persons interested in natural science to meet at Topeka on the first Tuesday of September next, at 3 P. M., at the college building, for the purpose of organizing a State Natural History Society. Signed by John Fraser, S. F. Chapin, D. H. Robinson, B. F. Mudge, J. A. Banfield, J. D. Parker, D. Brockway, J. R. Swallow, J. H. Carruth, R. D. Parker, Jeff. Robinson, Peter McVicar, F. H. Snow, Prof. Whitman, Richard Cordley."

The meeting was held pursuant to the call, as described by Prof. Parker. In a recent letter from him (from Fort Hays, where he now is), in reply to the inquiry as to the names of those in attendance at the first meeting, he says: "Very few were present at the first meeting. Prof. Mudge was the only person who did not belong at Topeka. Prof. J. A. Banfield was our first curator. Two or three students of Lincoln College were present, Mr. Billard and Mr. W. J. Stringham, the latter a mathematician of fine promise, and now professor of mathematics in the University of California. The few others I cannot remember." It is probable that Mr. Brockway was present. They were few in attendance, but the Society of Natural History — later the Academy of Science — was organized, and has increased in interest and good works until it now holds a position of which every devotee of science in the State should be proud. The meeting was held in the recitation room of Prof. Parker, in Lincoln College, later Washburn College, which is the stone building yet standing southeast of the capitol square, on the corner of Tenth and Jackson streets. The building was purchased by the city of Topeka when Washburn College moved into its new building, southwest of the city, and has since been used as a public school.

The minutes of the first meeting are of such interest that I have transcribed them from the Secretary's record, and are as follows:

"Pursuant to a public call, the naturalists of the State met at Lincoln College, Topeka, Kansas, September 1, 1868, for the purpose of organizing a 'State Natural History Society.' A preliminary organization was effected, with Prof. B. F. Mudge temporary chairman, and Prof. J. D. Parker temporary secretary. The secretary then read letters from different naturalists in the State, regretting their necessary absence, and pledging their coöperation. The whole matter was then fully discussed, and the meeting resolved to proceed at once to organize a State Natural History Society. A constitution and by-laws were read, discussed, and adopted. The officers elected for the following year were: President, B. F. Mudge; Vice President, Prof. Whitman; Secretary, J. D. Parker; Treasurer, F. H. Snow; Curator, J. A. Banfield. On motion, Drs. D. C. Freyer and Geo. H. Sternberg were elected honorary members. It was then resolved that each member of the Society is expected to present a paper on some scientific topic at each annual meeting. The executive committee were directed to provide a public lecture at each annual meeting.

"On motion, adjourned. J. D. PARKER, *Secretary*."

The following constitution and by-laws were adopted at this meeting:

"CONSTITUTION.

"ARTICLE I. This association shall be called the Kansas Natural History Society.

"ART. II. The object of this Society shall be to increase and diffuse a knowledge of the natural sciences, particularly in relation to the State of Kansas.

"ART. III. The members of this Society shall consist of two classes — active and honorary. Active members may be elected at any regular meeting of the Society, and shall sign the constitution, and pay an annual fee of one dollar. Honorary members may be elected on the written recommendation of two members of the Society.

"ART. IV. The officers of the Society shall be chosen by ballot, at the annual meeting, and shall consist of a president, vice president, secretary, treasurer, and curator, a majority of whom shall constitute the executive committee.

"ART. V. The annual meetings shall be held at the capital of the State, at such times as the Executive Committee shall designate.

BY-LAWS.

"SECTION 1. Each branch of natural science shall be assigned to some member of the Society, who shall make an annual report on the same, and assist the Curator in arranging the specimens in a cabinet.

"SEC. 2. No bills of the Society shall be paid by the Treasurer without an order signed by the President and Secretary.

"SEC. 3. No meeting shall be held without a notice of the same being published in the papers of the State at least thirty days previously.

"SEC. 4. Special meetings of the Society shall be called at such time and place as the Executive Committee shall direct."

The following additional by-law was subsequently adopted:

"SEC. 5. Members who shall allow their dues to remain unpaid for three years shall have their names stricken from the rolls, having been notified by the Treasurer."

Following the constitution in the Secretary's book is a roll of the members, giving their names, residence, age, nativity, occupation, and other items — a most curious and interesting record as we look back upon it now. It comprises an extensive list of names up to the present, with an extremely varied assortment of ages, occupations, etc. Many of them, alas, have now passed out into the shadows of the beyond! The honored name of Professor Mudge heads the list of members; Professor Parker comes next, and then follow the names of many who have been active in the work of the Academy, and many who have never since been heard from. Many of our most active members now, recorded themselves, when joining the Academy, as simply "students" — a most significant occupation, and prophetic of the useful future in store for them.

The next meeting was held, pursuant to the call of the Executive Committee, in the Presbyterian church, at Topeka, September 7th, 1869, the President, B. F. Mudge, in the chair. Professor Snow writes me that "at the meeting of 1869, I remember that there were but three members present on the first of the two-days session. These were Professors Mudge and Parker, and myself. Several new members were voted in, and took part in the proceedings of the Academy. It is probable that Dr. R. J. Brown, of Leavenworth, was also present."

The old officers were unanimously reëlected.

The Secretary gave a *résumé* of the operations for the year, of making arrangements with other societies for exchanges, etc.; and in this connection it is interesting to note that even yet periodicals are occasionally received directed to the "Natural History Society" of Kansas.

Professor Mudge read a paper on "The Internal Heat of the Globe," which was much discussed.

In the evening, Professor Mudge stated at length the objects and needs of the Society. A paper was read from Mr. Edward Cave on "Solving the Higher Equations," and Prof. J. D. Parker delivered the lecture of the evening on the "Antiquity of Man on the American Continent," which was followed by other opinions on the subject.

Professor Mudge exhibited a fossil elephant tooth, found at Manhattan, and described such occurrences. (*Educational Journal*, vol. 6, page 131.)

The third annual meeting was held in the University building, at Lawrence—the old building, I presume—September 5th, 1870, Professor Mudge in the chair. The additions to the membership, and also the attendance at this meeting, were very large, and the town was lavish in its hospitality to the visiting members. Professor Fraser delivered a lecture in the evening upon "The Aims, Organization and Advantages of Scientific Association." He suggested the enlargement of the scope of the Society to embrace the whole field of science, not the natural sciences exclusively; and a committee was appointed to carry out the suggestion.

The next morning, papers were read by Prof. J. H. Carruth on "A List of the Plants of Kansas;" Prof. F. H. Snow on "The Fishes Found in the Kaw River, at Lawrence;" Prof. J. D. Parker on "The Internal Heat of the Globe," and others.

In the afternoon, papers were read by Professors Saunders, Carruth, and Mudge.

Officers for the following year were elected as follows: President, John Fraser; Vice President, B. F. Mudge; Secretary, J. D. Parker; Treasurer, F. H. Snow.

In the evening a lecture was delivered by Rev. James Burrows, on "Hugh Miller on the Workingman's Education." Prof. Fraser, who was born in Cromarty, gave some recollections of Hugh Miller.

The meeting was very successful, as the Lawrence meetings have always been, owing to the great assistance of the University people and the appreciation of the residents of Lawrence.

The fourth annual meeting was held in Leavenworth, in the Board of Education rooms, on the morning of October 25, 1871; President Fraser in the chair.

In the afternoon the President gave an address upon "The Physical Constitution of the Moon," which was much discussed.

In the evening the President made some remarks upon the "Influence of Science upon Civilization," and Prof. Snow lectured upon "The Claims of Natural Science."

On the morning of the second day, "Additions to the Flora of Kansas" were reported by Profs. Snow and Carruth and Mr. John Wilson. Prof. Snow presented a list of the "Birds of Kansas," 163 species then known.

In the afternoon papers were read by Profs. Parker, Mudge, and Wherrell.

The officers were reëlected, with the addition of Dr. R. J. Brown as Second Vice President.

The Committee on Organization, appointed at the last meeting, submitted the following changes in and additions to the constitution and by-laws, which were adopted:

> "ARTICLE I. This Society shall be called the Kansas Academy of Science.
>
> "ART. II. The object of this Society shall be to increase and diffuse a knowledge of science, particularly in relation to the State of Kansas."

Section 1 of the by-laws was amended to read: "The general sciences shall be assigned to sections, whose duty it shall be to report through their respective chairmen, at such times and places as the Secretary shall direct."

It was agreed that the Mercantile Library Association of Leavenworth be an authorized agent of the Academy, to receive all such scientific specimens as may be offered for the use of the Society, and to preserve the same subject to the order of the Society.

In the evening Prof. Mudge gave a lecture upon the "Geology of Kansas."

The meeting was quite successful, and many persons were admitted to membership.

It is a noteworthy fact that about this time the leading men of the Academy were very active in disseminating scientific knowledge, and the papers and periodicals of the State of those years are filled with scientific articles from Profs. Mudge, Snow, Carruth, Parker, and others. They did a great deal of useful work in this manner, which in our day has borne good fruit.

The fifth annual meeting was held at Manhattan, opening at 7:30 P. M., October 8th, 1872, in the Congregational church. The President and Vice President being absent, it was called to order by the Secretary, and Professor Snow was elected temporary chairman.

Papers were read by Professor Robinson and Colonel Tweeddale.

On the morning of the second day, Professor Mudge, Second Vice President, presided.

Additions to the flora were made by Professors Carruth, Snow, and Mr. Popenoe. Mr. Joseph Savage gave an address on "The National or Yellowstone Park." The officers were reëlected.

During the morning and afternoon, papers were read by Dr. Saunders, Professors Mudge, Snow, Parker, J. H. Lee, and others.

On Wednesday evening, Rev. Charles Reynolds delivered a lecture to a crowded house upon the "Agreement of the Bible with Geological Science."

The meeting was a great success, and the enjoyment of the members complete. (*Educational Journal*, vol. 9, page 221.)

The *Educational Journal* has good reports of the most of the meetings for these years, and which were not published in volume form.

The sixth annual meeting was opened in the Presbyterian church, at Lawrence, on the evening of September 8th, 1873, President Fraser in the chair.

President McVicar, of Washburn College, delivered a lecture upon "Darwinism."

In the morning the meeting was held in the University building. Miss Detmers read a paper on "The Action of Lime on Soils," and Professor Mudge one upon "The Mound Builders."

One of the most important results of this meeting was the formal acceptance by the Academy of the provisions of the act passed by the preceding Legislature, making the Academy a coördinate department of the State Board of Agriculture. The act is as follows:

> "The Academy of Science shall be a coördinate department of the State Board of Agriculture, with their office in the Agricultural rooms, where they shall place and keep for public inspection the geological, botanical and other specimens; the same to be under the direction and control of the officers of the said Academy of Science. An annual report of the transactions of said Academy of Science shall be made on or before the 15th day of November of each year to the State Board of Agriculture, for pub-

lication in the annual transactions of said Board. This section is to be inoperative and void unless accepted by said Academy of Science, in writing, signed by the President, and attested by the Secretary thereof." (Ch. 137, sec. 2, Laws of 1873.)

The formal acceptance was duly accomplished, and the Academy since that time has been a coördinate branch with the State Board of Agriculture. Our proceedings since then have been published by the State in connection with, and also in separate volumes from, the report of the Board. Our museum, such as it is, is in a room adjoining that of the Board.

In the afternoon, papers were read, specimens exhibited, etc.

A resolution was adopted establishing relations with local scientific organizations as auxiliary societies. This was brought about by the application of the Topeka Scientific Institute for such recognition.

Attention was called to the matter of securing a set of standard weights and measures, which are provided by Congress for each State. They were afterwards procured, and used for a time at the University for comparison and sealing of private sets; but the standards were afterwards ordered to be brought to Topeka by the Legislature, and now repose somewhere in the bowels of this building. When the Academy obtains a museum room worthy of the name, they can be set up and be of some use; but there is no place for them now. It is the intention to have each county provide a set proven by these standards, with which private dealers will be obliged to compare their weights and measures and have them sealed as being of legal standard. The Government standards should not be used except for comparing county standards.

Entomology began to loom at this meeting, and the exhibit by Prof. Snow was very fine.

In the evening interesting addresses were made by Professors Stimpson and Mudge, and Dr. Reynolds.

Officers were elected as follows: President, F. H. Snow; Vice Presidents, J. A. Banfield and J. D. Parker; Secretary, John Wherrell; Treasurer, R. J. Brown; with curators and commissions.

This meeting was exceedingly interesting and successful, owing to the efforts of the University men. It is of especial interest to me personally, as it was my first meeting, and when I joined the Academy, which makes this the tenth anniversary of my membership—my jubilee year! It was under the guidance of Mr. Popenoe that I met Profs. Mudge, Snow, Savage, Fraser, Bardwell and others, whose names are suggestive of very many delightful hours. Ten years make many changes, and with the Academy and its *personnel* the changes have been marked—many of them painful to recall as we think of those who are gone.

The seventh annual meeting was held pursuant to adjournment, at Topeka, October 5, 1874, where all the meetings have been held since then. This, as well as the subsequent meetings, have honored me by holding the first afternoon or business meeting in my office. The attendance was good, and many were admitted to membership, among them Prof. Geo. C. Merrill, W. K. Kedzie and Geo. E. Patrick, of fragrant memory.

In the evening a lecture was delivered by Prof. H. B. Norton, on "The People and Landscape of the Glacial Age," in the old Representative hall at the Capitol, where the popular lectures were given for many annual meetings, while day meetings were held in the Senate chamber. The lectures were sometimes given in the Senate chamber, and once in the Baptist church, just east of the Capitol.

The morning and afternoon of the second day were fully occupied with the reading of many valuable papers. In the evening Rev. H. C. Hovey lectured.

The eighth annual meeting was held October 12, 1875. Very many valuable and interesting papers were read, and lectures delivered by Prof. Snow on "Meteors," and Prof. Mudge on "Darwinism."

The attention of the Academy was called to the need of a geological survey, which was discussed, and resolutions adopted urging it.

Prof. Snow was continued as President, and Prof. Mudge as Vice President; Prof Kedzie was elected Treasurer, and Mr. Joseph Savage Secretary.

The meeting was very successful, and well attended.

The ninth annual meeting was held November 14, 1876. The feature of this meeting was the lecture of Prof. C. V. Riley, upon "The Rocky Mountain Locust." The officers were reëlected. It was resolved to hold semi-annual popular meetings of the Academy.

The evening of the second day Prof. Bardwell delivered a lecture upon "Our Neighbor, the Moon."

The first semi-annual meeting was held in Leavenworth, in June, 1877, and was addressed by Profs. Snow, Mudge, and others.

The tenth annual meeting was held at Topeka, October 11, 1877, and was also characterized by an extensive array of valuable papers. Prof. Mudge delivered a lecture upon the "Value of Science," and Prof. G. E. Patrick one on the "Chemistry of the Sun."

The second semi-annual meeting was held at Kansas City, June 6, 1878, as the guests of the Kansas City Academy. The events of the meeting, which were exceedingly enjoyable, were a lecture upon "Rocky Mountain Geology," by Prof. Mudge, and upon "Steam Navigation," by Prof. Bardwell, and an excursion to and examination of mounds in Platte county, Missouri.

The eleventh annual meeting opened at Topeka, October 8th, 1878. The first evening's lecture was by Prof. B. F. Mudge, upon "The Rocky Mountains and their Fossils," and that on the second evening by Prof. D. H. Robinson, upon "The Historical Value of Linguistic Study." These were given in the Baptist church. Twenty-five papers were read at this meeting. Appropriate resolutions were passed upon the deaths of Profs. John Fraser and F. W. Bardwell, which had occurred since the last meeting. Two valuable and active members were lost to the Academy.

The twelfth annual meeting was held November 6th, 1879, at which a good programme was presented, and a numerous attendance had, both of members and of the public. Prof. Mudge, who had been President for a year, was reëlected. He delivered an interesting lecture in the evening, upon the "Mound Builders of North America."

On the second day Prof. J. H. Canfield gave a lecture upon "The Relation of the State to Higher Education."

This meeting was eventful as being the last at which Prof. Mudge was present. He died while in office, as its President. This lamentable event transpired upon the 21st of the same month of the meeting, November, 1879, exactly four years ago this very evening, making this the anniversary of the sad event. His funeral was largely attended by the members of the Academy, and none knew better than they the irreparable loss the people of the State had sustained. His death was the greatest calamity the cause of science in Kansas has ever experienced, for he did more for its advancement than any other person, or, perhaps, all others combined. And that he was appreciated abroad as well as at home, the following significant incident will illustrate. Shortly after his death, Mrs. Mudge, received from Dr. C. A. White, of the United States National Museum at Washington, advance sheets of their proceedings for 1879, containing descriptions of two new cretaceous fossils discovered by Prof. Mudge, *Gervillia Mudgeana*, sp. nov., (plate 5, figs. 3 and 4,) and *Pteria salinensis*, sp. nov., (plate 5, figs. 1 and 2.) Page 292 of the proceedings has this foot-note:

"While these pages are passing through the press, the sad intelligence comes that Prof. B. F. Mudge is dead. He was a sincere devotee and an intelligent interpreter of nature, and better still, an honest man. Peace to his ashes.—C. A. W."

These words, expressing the appreciation of the man by the scientific world by one capable of understanding him, are in striking contrast with the estimation of another set of persons, who did him a gross, stupid injustice at the Agricultural College. A peculiar interest attaches to the shells mentioned above. They were among the latest collections of Prof. Mudge, while yet Professor of Geology at the Agricultural College; but after he left they were thrown out with other rubbish, "old bones and old stones," as the College President termed them. Not long before Prof. Mudge's death, he, in company with a friend, revisited for the first time the old College grounds, and looking over a heap of debris, his quick eye at once recognized the familiar specimens, and though some years had elapsed, he remembered the locality in Saline county where he had obtained them. Considering them new to science, he recovered and sent them to Dr. White, of the National Museum, who described and named them. Of the one mentioned in honor of Prof. Mudge—*G. Mudgeana*—he says: "It presents one more, among other now known similar cases, of evident genetic relationship between the Molluscan Fauna of the Dakota Group, and that of the later cretaceous groups of the West, which were formerly unknown, but which the discoveries of Prof. Mudge have done more than that of all others to show." How grateful to our ears is this tribute to our dear friend from one so high in science, and how satisfactory to have his own opinion corroborate our own.

During 1880 and '81 a committee appointed by the Academy secured sufficient funds by popular subscriptions to erect a monument over Prof. Mudge's grave at Manhattan, which was appropriately dedicated after the meeting in 1881. It was a pleasant duty to thus honor the last resting-place of our beloved friend.

"He was a man, take him all in all,
We shall not look upon his like again."

Of the last four years there is little to be said of the Academy that is not fresh in your memory. The meetings have been held each year in Topeka, and have been full of interest; valuable papers have been read and popular lectures have been sustained as usual. The principal matter of interest has been the constant effort put forth to secure the passage of a bill for a geological survey, of which the State stands so much in need. Last winter a special endeavor was made, but success has not yet crowned our efforts. The Academy now stands well, and is known throughout the entire scientific world. The publications are sought after by the scientific men and institutions of this country and of Europe, and the most of them are on the exchange list.

This prominence and honor is due to the reputation of the earnest workers we have in our ranks, who are doing good work in studying and classifying the products of nature in the various departments, and also to the fact that we occupy a most important field geographically. This is a responsibility which we recognize, and we endeavor by all means in our power to discharge our duty in the matter, to science and to the people of the State. Most fortunately the men have risen to do the work, and have cultivated the field with honor to themselves and to the Academy.

In the furtherance of our work one thing remains for us to accomplish before our honor and dignity shall be complete, and that is the geological and scientific survey of the State. That is one main object of our existence, and toward its accomplishment we must labor continuously until success shall crown our efforts, as it is certain to do. We must agitate the subject in season and out of season, until we obtain final victory. It is a duty we owe to ourselves, to the State, and to science.